

Attorney Docket No.: TRAN-P004.DIV

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

RECEIVED

Inventor(s):

Edmund J. Kelly, Robert F. Cmelik and Malcolm J. King

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Serial No.:

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Group Art Unit:

2186

Technology Center 2100

Filed:

10/30/00

Examiner:

Thai, Tuan V.

Title:

TRANSLATED MEMORY PROTECTION APPARATUS FOR AN ADVANCED MICROPROCESSOR

Form 1449

U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub- class	Filing Date
M.	A	5,564,018	10/08/96	Flores et al.	395	200.02	11/15/93
	В	5,568,614	10/22/96	Mendelson et al.	395	200.08	07/29/94
	С	5,740,391	04/14/98	Hunt	395	376	03/01/96
	D	5,792,970	08/11/98	Mizobata	84	607	05/30/95
	E	6,079,003	06/20/00	Witt et al.	711	200	11/20/97
	F	6,208,543	03/27/01	Tupari et al.	365	49	05/18/99
	G	6,266,752	07/24/01	Witt et al.	711	200	04/17/00
	<u> </u>	5,138,708	08/11/92	Vosbury	395	575	08/03/89
V		5,410,658	04/25/95	Sawase et al.	395	375	10/13/92
<u></u>	<u>J</u>	4,590,549	05/20/86	Burrage et al.	364	131	05/27/83

Foreign Patent or Published Foreign Patent Application

Examiner	T	Document	Publication	Country or		Sub-	Trans	lation
Initial	No.	No.	Date	Patent Office	Class	class	Yes	No
የካ	K	EP0742512A2	11/13/96	EPO	G06F	9/38	x	
m	<u> </u>	WO96/30829	03/10/96	PCT	G06F	9/455	х	

Other Documents

Examiner		
Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
n	М	Ebcioglu et al.; "DAISY: DYNAMIC COMPILATION FOR 100% ARCHITECTURAL COMPATIBILITY"; IBM Thomas J. Watson Research Center Yorktown Heights, NY; 02/06/97
M	N	IBM Technical Disclosure Bulletin; "GATHERING STORE INSTRUCTIONS IN A SUPERSCALAR PROCESSOR"; XP 0006382245; Vol. 39, No. 9, Sept. 1996 pgs. 103-105
Examiner		uan V. Thai Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



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Initial No. Patent No. Date Patentee Class Class Date TM A 5,349,658 09/20/94 0'Rourke et al. 395 700 11/0	Examiner						Sub-	Filing
No. A 5,349,658 09/20/94 0'Rourke et al. 395 700 11/0		No.	Patent No.	Date	Patentee	Class		Date
B 5,467,473 11/14/95 Kahle et al. 395 800 01/0			5,349,658	09/20/94	O'Rourke et al.	395	700	11/01/91
D 5,274,815 12/28/93 Trissel et al. 395 700 11/0 E 6,031,992 02/29/00 Cmelik et al. 395 705 07/0 F 4,530,050 07/16/85 Fukunaga et al. 364 200 08/1 G 5,553,255 09/03/96 Jain et al. 395 375 04/2 H 4,896,257 01/23/90 Ikeda et al. 364 200 11/2 I 5,581,722 12/03/96 Welland 395 417 09/2 J 5,613,083 03/18/97 Glew et al. 395 417 09/2 K 5,442,766 08/15/95 Chu et al. 395 414 10/0 L 4,954,942 09/04/90 Masuda et al. 395 417 10/0 M 5,465,337 11/07/95 Kong et al. 395 417 10/0 N 5,526,510 06/11/96 Akkary et al. 395 460 09/2 D 5,142,672 08/25/92 Johnson et al. 395 500 12/2 P 5,561,814 10/01/96 Glew et al. 395 833 12/2 Q 5,930,832 07/27/99 Heaslip et al. 711 207 06/0 R 5,958,061 09/28/99 Kelly et al. 714 1 07/2 S 5,805,490 09/08/98 Machida 364 784.01 07/2 T 5,282,274 01/25/94 Liu 395 400 05/2 U 4,481,573 11/06/84 Fukunaga et al. 364 200 11/2 X 4,914,577 04/03/90 Stewart et al. 395 400 05/2 X 4,914,577 04/03/90 Stewart et al. 395 500 12/2 Z 5,097,409 03/17/92 Schwartz et al. 395 400 03/2 X 4,914,577 04/03/90 Stewart et al. 395 400 03/2 X 4,914,577 04/03/90 Stewart et al. 395 400 03/2 X 5,507,231 11/19/96 Scalzi et al. 395 400 03/2 X 4,914,577 04/03/90 Stewart et al. 395 400 03/2 D 5,247,648 09/21/93 Brayton et al. 395 425 06/2 DD 5,247,648 09/21/93 Watkins et al. 395 425 04/2 DD 5,247,648 09/21/93 Kaimura 395 575 07/2				11/14/95	Kahle et al.			01/08/93
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EE 5,317,720 05/31/94 Stamm et al. 395 425 03/ FF 5,239,646 08/24/93 Kimura 395 575 07/					Watkins et al.	395	425	04/30/92
FF 5,239,646 08/24/93 Kimura 395 575 07/					Stamm et al.	395	425	03/22/93
				08/24/93	Kimura	395	575	07/02/90
/ GG 4,598,402 07/01/86 Matsumoto et al. 371 38 11/					Matsumoto et al.	371	38	11/07/83
					Fry et al.	364	200	10/11/83
	m.				Joichi et al.	395	183.13	02/24/93

U.S. Pat nt Documents

CHAP						Sub-	Filing
Examiner	No	Patent No.	Date	Patentee	Class	class	Date
Initial	_	4,607,331	08/19/86	Goodrich, Jr. et al.	364	200	05/13/83
·7h	JJ		08/21/84	Fry et al.	364	200	03/06/81
	KK	4,467,411	01/28/75	Taylor	340	172.5	12/13/73
	LL	3,863,228	05/14/96	Sefidvash et al.	395	182.03	08/15/94
	MM	5,517,615		Glew et al.	395	185.06	09/30/94
	NN	5,564,111	10/08/96	Boggs et al.	395	182.08	03/01/94
	00	5,566,298	10/15/96	Scantlin	395	800	03/25/94
	PP	5,574,927	11/12/96	Baraz et al.	395	705	08/07/96
	QQ	5,721,927	02/24/98	Klein et al.	395	500	05/14/96
	RR	5,768,567	06/16/98		395	500	12/01/95
	SS	5,838,948	11/17/98	Bunza	395	375	11/21/94
	IT	5,481,685	01/02/96	Nguyen et al.	395	591	06/07/95
	UU	5,644,742	07/01/97	Shen et al.	395	385	10/02/95
	VV	5,638,525	06/10/97	Hammond et al.		500	10/05/93
	WW	5,613,090	03/18/97	Willems	395		01/04/94
	XX	5,604,753	02/18/97	Bauer et al.	371	40.1	
	YY	5,598,560	01/28/97	Benson	395	707	03/07/91
	ZZ	5,598,546	01/28/97	Blomgren	395	385	08/31/94
	AAA	5,574,922	11/12/96	James	395	561	06/17/94
	BBB		08/13/96	Coon et al.	395	375	05/12/95
	CCC		06/18/96	Beardsley et al.	395	185.01	12/22/92
 	DDD		10/08/96	Yamashita et al.	395	182.15	08/25/94
 	EEE		04/09/96	Sites	395	800	03/07/91
	FFF		09/21/93	Grohoski	395	375	01/17/90
Th.	GGG		02/12/91	Portanova et al.	364	200	03/30/90

Foreign Patent or Published Foreign Patent Application

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1	Everniner		Document	Publication	I Country or		Sub-	Trans	lation	
	Examiner			1 _	Datant Office	Class	class	Yes	No	ı
1	Initial	No.	No.	Date	Patent Office			+	 	1
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Examiner					
Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication			
	(1)	Halfhill; "EMULATION: RISC'S SECRET WEAPON"; Special Report: The RISC			
1 1h.		Desigion: RVTE April 1994			
	JJJ	Androus et al. " MIGRATING A CISC COMPUTER FAMILY ONTO RISC VIA OBJECT CODE			
-		TRANSLATION"; Tandem Computers, Cupertino, CA 1992 Pgs 213-222; Association of			
1 1		Computing Machinery 1992			
	KKK	Cmelik et al.: "SHADE: A FAST INSTRUCTIONSET SIMULATOR FOR			
1		EXECUTION PROFILING": Association for Computing Machinery 1994			
1 	LLL	Bedichek: "TALISMAN FAST AND ACCURATE MULTICOMPUTER SIMULATION";			
1 1		Lab for Computer Science Cambridge MA; Association of Computing Machinery 1995			
	MMM -	Ando et al: "UNCONSTRAINED SPECULATIVE EXECUTION WITH PREDICATED			
1	}	STATE BUFFERING"; System LSI Laboratory, Japan; pgs 126-13; Association of			
1	l .	Computing Machinery 1995			
	NNN	May; "MIMIC: A FAST SYSTEM/370 SIMULATOR; IBM Thomas J. Watson Research			
1 1 .	1	Center NY: Association of Computing Machinery 1987			
 	000	Tramblev et al : "A FAST AND FLEXIBLE PERFORMANCE SIMULATOR FOR			
		MICRO-ARCHITECTURE TRADE-OFF ANALYSIS ON ULTRASPARC-I"; 32nd			
		Design Automation Conference; San Francisco, CA 1995			
 	PPP	Kumar et al.; "EMULATION VERIFICATION OF THE MOTOROLA 68060"; Motorola			
1		Inc.; Austin, TX; 1995 IEEE			
 	QQQ Note et al.; 'RAPID PROTOTYPING OF DSP SYSTEMS: REQUIREMENTS A				
	~~~	SOLUTIONS"; Philips ITCL Belgium; 1995 IEEE			
<del>                                      </del>	RRR				
I ħu.	'""	Sigmetrics ACM 1996; pages 68-79			
- ''	<u> </u>	Date Considered			
Examiner	7	1 an V. Thai			

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